REPORT No. 3

Public servants' and teachers' pension plan: cost and risk sharing options

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Public Sector Pensions Consultations

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Report #3

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INTRODUCTION

This memorandum discusses cost and risk sharing options for the public service and teachers pension plans. It has been prepared at the request of Dr. David Slater, Special Advisor to the Public Sector Pensions Consultations division of the Government of Ontario.

Background

In his report to the Treasurer of Ontario on the financing of benefits under the Superannuation Adjustment Benefits Act and Associated Superannuation Plans, Mr. Laurence E. Coward recommends that the basic and inflation adjustment funds for public servants and teachers pension plans should be viewed as one entity and should be fully funded anticipating future indexation liabilities. Currently, the indexation liabilities are financed on a modified pay-as-you-go basis. Mr. Coward's funding approach, which is closer to practices in the private sector, not only reveals a large past service unfunded liability for the plans, but also increases the ongoing annual cost for future service ("normal cost")

Mr. Coward further states in his report that "The principle that the employees' contribution rate should cover 50% of the cost of benefits is well established. It is recommended that the employees' contribution rates should be 50% of the costs on an entry age normal basis....".

While past practices would substantiate Mr. Coward's assertion of 50/50 cost sharing being "well established", it is not clear that such principle and its implications have been clearly enunciated by the employer or accepted by members. There is also the question as to what is meant by "cost". For example, it could be argued that the sharing of the previous contributions was based not so much on the intrinsic value of the benefits being provided, but more on the particular method the government had chosen to finance the plans previously -- including the arbitrary modified pay-as-you-go financing of the indexation provision which was significantly lower than the value of the provision to the members.

Nature of the "Pension Deal"

Cost sharing can not be dealt in isolation. It must be considered within the framework of the nature of the total pension deal which is clearly defined and communicated to employees and, ideally, documented. Unfortunately, the nature of the deal tends normally to be inferred or deduced from the prevailing practices and documentation (and differently by different parties), and leads quite often to misunderstanding and false expectations.

The elements of a pension deal would include:

- Cost Sharing: This entails both the basis for costing and, once the cost has been determined, the respective shares of the employer and the member. The basis for costing need not necessarily follow the funding basis.

- Risk Sharing: Clarification as to who assumes risk for any deviations of the costs attributable to the evolving experience of the plan. The initial costs are based on certain scenarios about the future including:

  -- Economic factors such as annual investment returns, rate of inflation, rate of increase in pensionable pay and rate of increase in Canada Pension Plan covered earnings.

  -- Demographic factors such as rates of mortality, employment termination, retirement incidence by age or disability and marital status of members at point of death or retirement.

  The actual experience will differ from the assumed scenario and cause either an experience deficiency or gain. The party which assumes the risk will be responsible for making up the deficiency or retaining the gains. Of course, risks may be shared in various proportions.

- Security of benefits: The manner in which the benefits are to be secured. Normally, security is provided through a fund which is set aside from the assets of the employer and the fund must first be used to provide for the contractual benefits. Indeed, the Ontario Pension Benefits Act requires a minimum level of funding to ensure such security. In an absolute sense, of course, it is not essential to set aside funds if substantial security can be provided through escrow on employer assets or, in case of a government where bankruptcy or employer solvency is not in question, through a stringent documentation of rights. But solvency is not the only employer circumstance which may impinge on security; there is also the possibility of reneging of the promise in the future. External funding can substantially reduce the probability of such reneging.

Two further elements of a pension deal need to be considered:

- **Investment Policy:** Investment returns and salary increases are by far the most material factors influencing costs. An aggressive investment policy should, in the long rum, produce greater investment returns and therefore lower costs. At the same time, however, such an investment policy will cause a greater short run variability in returns and consequently on the incidence of costs, especially given the current regulatory and accounting environment which puts constraint on how such short term variations must be dealt with. The investment policy should therefore reflect the ability of the party or parties undertaking or sharing the risk. Thus, if the employer is the primary risk-bearer, there should be a greater capacity to withstand short-term variability and therefore a lower expected long term cost.

- **Recognition of Costs:** In the private sector, funding is usually based on conservative scenarios regarding the future; that is, stringent actuarial assumptions are normally utilized. Thus, the funding basis is biased towards producing gains rather than losses. Such stringency in funding is proper, because it enhances the security of employee benefits and at the same time minimizes the chance of undue increases in future contribution requirements.

  The imperative for full funding in government sponsored plans may be less given that:

  - insolvency of government is not a concern; and

  - any danger of a future government reneging the pension contract can be minimized through rigorous documentation.

In view of this bias in funding, it is now an acceptable principle in the private sector to recognize pension costs in the corporate financial statements on a best case scenario with full anticipation of all the liabilities for service to date, regardless of the level of funding.

Similar distinction between funding and cost recognition should be drawn with respect to government sponsored plans. If the funding of government sponsored pension plans falls short of this "best case" benchmark, as seems to be the case given the pay-as-you-go status of the indexation benefits, the difference should be recognized explicitly in the fiscal statements of the government. Such practice would serve to provide a better disclosure to taxpayers, would decrease the probability of reneging of the contract by a future government since the past costs would have been fully recognized and would bring the government accounting practices in line with private sector practices.

The nature of the pension deal will have a direct bearing on the governance of a pension plan. For example, if the employer and employees are equally sharing the costs and the risks, the employees would want an equal say in the decisions regarding investment policy -- since the results of the investment policy as well as the anticipated investment returns for costing purposes will affect both the level and variability of future employee contributions.

Options

Assuming that there is no intention of changing the defined benefit nature of the plan, two polar cases of pension deal options have been considered in the following two sections:

- Option 1: **Employer assumes all the risks.** Employee contributions are defined or negotiated to be at a certain threshold and the employee is insulated from future cost variations.

- Option 2: **Costs and risks are equally shared.**

In a later section, we have considered more radical options including those which involve money purchase (defined contribution) pension design. This type of plan shifts all the risks to the employee.

OPTION 1 -- EMPLOYER ASSUMES RISK

This model can be classified as a pure defined benefit plan with the employer assuming the residual risk beyond a predetermined level of employee contributions. This model is more akin to the situation generally found in the private sector.

Implications of Option 1 are discussed below.

Cost Sharing

Employee contributions are determined in advance. In order to establish a proper threshold, it is first necessary to determine the value of the total pension benefit. The cost sharing can then be based on a given proportion of this cost. Such proportion does not necessarily have to be 50%. It could be a lesser proportion such as 40%, or a higher proportion such as 60%, or an arbitrary amount such as 7.5% of pay inclusive of contributions to Canada Pension Plan. The level of employee contributions can, if desired, be made the subject of negotiation with the employees. They could also be allowed to vary by earnings level.

If the employee contributions are established below 50% of the value of the benefit, it would reinforce the employer commitment and risk.

In order that the cost sharing is seen as fair, the value of the pension promise should be based on a scenario that is devoid of financing and cost-recognition considerations such as the preferred investment policy, funding method, past service deficits and so on. It is suggested that the following factors would meet the test of fairness:

- Entry age normal cost method. This expresses the value of the total benefit as a level percentage of career earnings of a typical new member of the plan.

- Best estimate of economic factors such as real rates of investment return, inflation rates, rates of salary increases, and wage inflation. In particular, real rates of return should reflect a "normal" investment portfolio found in private sector pension funds rather than the preferred investment policy of the government. This also implies that the assumed real rate of return should be somewhat higher than the "risk-free" rate. Current economic thought postulates a long term annual risk-free real rate of return in the 2% to 4% range. Economic factors have by far the greatest impact on the resulting values and should be chosen with great care. For example, a mere ½% difference in the real rate of return assumption (other factors being held constant) could change the value by over 10%.

- No margins in the assumptions relating to demographic factors.

Risk Sharing

Once the employee contributions are determined the employees should be insulated from any experience related cost increases. Redetermination of employee contributions would only occur in context of benefit improvements or renegotiation of the total compensation package.

There is a legitimate employee concern that the employees would indirectly bear the risk of experience if additional costs incurred by the employer are factored into compensation costs in the future. Care should therefore be taken to exclude experience related differentials -- good or bad -- when considering compensation matters.

Once the employee is insulated from risks as above, the employer would be responsible for amortizing experience losses. Similarly, any experience gains or surpluses would fully accrue to the employer and the employer would retain ownership of such gains/surpluses.

Governance

Because the employer is assuming all the residual risk of the arrangement, in essence the employer has the right to decide the investment policy most suited to it, and funding and cost recognition, and the manner in which the plan will be governed.

However, the following constraints have to be taken into account:

- Security of earned benefits and the continuation of the plan remain of vital concern to employees. These concerns have to be addressed through a suitable level of funding, through stringent documentation in the statute, through representation on the body governing the financing of the plan, or through combination of all these.

- Taxpayers' interests must be safeguarded. Taxpayers have a vital interest in keeping the ultimate costs of the public service as low as possible. Investment in market securities, for example, could lead to reduction in costs if such investment is organized to minimize government intrusion in private sector enterprises. Proper disclosure of the costs to the taxpayers would imply full cost recognition of all the liabilities regardless of the level of external funding.

- Depending on the process for determining the compensation package, employees would wish to have a mechanism to influence the plan design in order to meet their evolving needs.

OPTION 2 - EQUAL RISK SHARING

Under this model, there would be an explicit recognition of equal cost and risk sharing between the employer and employees.

Implications of Option 2 are discussed below.

Cost Sharing

Again, it would first be necessary to establish the total "cost" of the plan. This time, however, the total cost would reflect the preferred investment and funding policy. It is suggested that the costs be based on a "best case" scenario, rather than a scenario with margins, to avoid frequent and fundamental adjustments in contribution rates.

Risk Sharing

Once the contribution rates have been established, they would have to be reviewed periodically in light of the actual experience of the plan. Experience gains and losses would be shared equally and used to adjust the contribution rates.

The variability of contribution rates can be reduced through actuarial smoothing techniques -- subject to regulatory constraints. Such smoothing techniques would include use of averaged market values of assets; amortization of experience gains and losses over as long a period as possible within law; formal valuation frequency of 3 years with annual monitoring of the evolving experience. One technique, of ignoring any accumulated gains and losses within a certain corridor (say 5-10% of total actuarial liability), would not be acceptable under the current funding standards set out in the Ontario pension law.

Regardless of smoothing techniques, employee contribution requirements would still be variable and less predictable than under option 1. A specific process for adjustment of contribution rates would therefore have to be agreed in advance and put in place.

Governance

Because employees and employers would be equally exposed to risk, employees would have a direct interest in the investment and funding policy of the plan.

Given past experience, a more aggressive investment policy -- one containing a greater proportion of equities -- would cause greater variation of contribution rates, even after taking into account the effect of any smoothing techniques utilized. These variations can be very significant in the short run. The capacity of employees to take this risk of variability in contribution rates would be considerably lower than that of the employer. Presumably, therefore, the preferred investment policy would be less aggressive and the eventual long term costs would be expected to be higher (although hopefully, more stable).

The employees would wish to have an equal say in all matters governing the plan -- including setting of funding level, investment policy, benefit levels, administration matters, and so on. It is essential, however, that the interests of the taxpayers be safeguarded for the reasons already discussed. One way to achieve this would be to charge the governance of the pension plan to a joint employer/employee body with equal representation, chaired by an independent person whose mandate would be to provide objectivity and safeguard the taxpayers' interest.

OTHER OPTIONS

In this section, other options will be discussed.

Different Proportions of Cost/Risk Sharing

As already alluded in the previous sections, instead of dividing up costs and risk elements into equal sharing, unequal sharing devices could be set up. In the context of Option 1, where all the residual risks are undertaken by the employer, this is more easily achieved administratively than would be the case with Option 2.

Money Purchase Alternative

The risk of the provision of pensions can be shared not only in the terms of the sharing of the finances but also in terms of the design. The current design of the public service and teachers' pension plans are of the defined benefit type. Under that type of plan, the level of benefits is guaranteed in terms of replacement income at point of retirement or other event.

Defined contribution plans -- commonly described as money purchase or capital accumulation plans -- represent another distinct type of plan. These plans operate like retirement savings accounts. Predetermined employee and employer contributions are paid into each employee's account. The account is invested much like an RRSP account and accumulated with investment return. At point of retirement or other event, the employee is provided income from the accumulated amount based on the prevailing annuity or interest rates. As is evident, the amount of retirement income that could be provided depends upon the period of saving, investment returns achieved, age at retirement and prevailing interest rates at retirement.

The level of retirement income under a money purchase plan is, therefore, variable and unpredictable. The accumulated money purchase account has also to be utilized to provide any desired level of post retirement inflation protection since there is no other source from which such protection can be provided. Thus the whole of the risk, along with the concomitant reward, is passed on to the employee.

If conversion of the pension design to money purchase is acceptable, there will be complications in that transitional arrangements will need to be made for the existing employees, at least with respect to past service benefits.

Decoupled Plan:
Combined Defined Benefit/Money Purchase

The shifting of the whole risk under the money purchase pension design to employees is quite often not acceptable. Many private sector employees have, therefore, either introduced or are considering the introduction of, an arrangement which entails combination of defined benefit and money purchase elements.

The arrangement essentially decouples employer and employee risk. The employer sets up a noncontributory defined benefit plan of a lower benefit and employee contributions are directed to a side fund and generate a money purchase benefit. The money purchase benefits may or may not have some employer contributions directed to them, depending upon the plan structure.

Thus the risks are very clearly delineated. The employer undertakes all the risks and costs for the defined benefit portion. The absolute level of contributions to the money purchase portion are predetermined so that there is no risk of cost increase; all the risk and rewards of this portion accrue to the employees. The governance of each portion follows naturally.

In the context of the government plans, such an arrangement could entail:

- **Employer Defined Benefit.** This would provide approximately one half of the current formula including the inflation adjustment portion. The annual benefit formula could be 0.7% of the final average earnings up to the Canada Pension Plan ceiling and 1% of the excess final average earnings. The governance of this portion would be parallel to Option 1.

- **Employee Defined Contribution.** Employees would contribute a given level of contributions which would accumulate in their individual retirement savings accounts. Investment choices could be provided. Flexibility as to the level of contributions could also be made available. For example, and employee could elect to contribute any amount from a minimum of 3% to the maximum allowed under tax rules.

Retiree Increases based on Excess Interest

An alternative to deal with the risks of post retirement inflation adjustment would be to set up an excess interest arrangement. Under this arrangement, annuity reserves at the point of retirement would be set up in a separate fund on the basis of some floor rate of interest reflecting real rate of return expectation -- for example 4%. Each year the amount of annuity would be adjusted by the actual investment return earned by this fund in excess of 4%. Although in the long term, such arrangement may reflect inflation actually experienced, past experience shows that there is no correlation between investment returns and rate of inflation in the short run and that there are massive fluctuations in the year to year real rates of return. Smoothing devices could be put in place to reduce the variability. Even so, retirees would bear the brunt of the investment risk but reap the possible rewards.

Limits on Employer Contributions (Multi Employer Pension Plan Model)

Under this arrangement, employer and employee contributions would be defined at a certain predetermined level. These contributions would be invested in a fund under the control and administration of a joint employer/employee body. The joint body would be responsible for providing defined benefits for various classes of members -- active, retired and terminated employees -- affordable from the available funds -- since the employer would not have any responsibility for making up deficits, although higher contribution rates could be negotiated in the future. If there are accumulated deficits, which are not made up through further negotiated employer contributions, these would impinge on the amount of benefits that can be provided

from the fund. Any surpluses or gains would have the opposite effect. This model of pension deal has been used with some success in multi-employer situations, e.g., The Toronto Transit Commission pension plan.

Thus the employer costs and risks are limited to agreed or negotiated contribution levels. Plan members collectively assume the risks.

CONCLUDING REMARKS

To summarize, it is necessary to reach an accord on the overall nature of the pension deal. Such a deal setting out the cost sharing, risk sharing, governance and other elements should be clearly communicated to the employees to increase their understanding, dampen any false expectations and increase awareness as to the respective responsibilities and liabilities of each party.

It is our view that employees would be reluctant to assume investment risk and variability in contribution rates. They would prefer to negotiate level of benefits and employee contributions, leaving the government to assume the risks. At the same time, the government would desire to maintain a level of administrative control and simplicity. Given this situation, Option 1 would seem to be the preferable route. Two major issues need to be addressed:

- If the employer is to assume all the risk, it should be clearly documented and communicated to the employees.

- If the employees are to be given the facility to negotiate level of employee contributions and benefit levels, statutory barriers will need to be removed.

Option 2 may have an intellectual appeal. However, it will give rise to administrative complications and may lead to misunderstandings as to exact nature of cost/risk sharing (for example, if variability in employee contributions becomes unacceptable in the future).

The options involving money purchase design may seem radical in the current context but warrant an examination in the future.

Some related matters deserve comments:

- If the full funding approach is accepted -- and given the need for comparability with private sector practices and compliance with pension standards laws, and the need to safeguard taxpayer interest, there is a robust argument for such an approach -- the question of accumulated deficit from the past needs to be addressed. In our view, since this deficit stems from a particular financing approach in the past and arose in an atmosphere of an ambiguous pension deal, some rough justice solution to this vexing question will have to be sought. An alternative would be for the government to assume the responsibility. Strictly speaking, the deficit could be retained as a frozen liability. However, we believe that serious consideration must be given to amortizing the deficit over a reasonable period of time, given that the government as an employer should abide by the same legislative standards as it sets for the private sector.

- In setting up cost-sharing arrangements, the maximum allowed levels proposed under the Canadian Income Tax Act -- in the context of the public service and teachers plans the general limitation of 9% of pay would be applicable -- should be borne in mind and adverse tax consequences avoided.

- The interests of the taxpayers must be heeded in making any funding or external market investment decisions.

A comprehensive treatment of each subject raised in this memorandum is outside the scope of our assignment. However, we would be pleased to undertake any commission to elaborate any particular topics or to provide background information.